

What is claimed is:

- 1 1. A method for operating a network connecting a plurality of processor cells that  
2 are already configured in a multiprocessor system with a plurality of links, comprising:  
3 recognizing by software operating on at least one processor cell when a network  
4 operation can use a link of said plurality of links to implement a network operation; and  
5 utilizing said link of said plurality of links to perform said network operation.
- 1 2. The method of claim 1, wherein said multiprocessor system is a symmetric  
2 multiprocessor system.
- 1 3. The method of claim 1, wherein said software is an operating system.
- 1 4. The method of claim 1, wherein said network is an Ethernet local area network.
- 1 5. The method of claim 1, wherein said multiprocessor system includes at least  
2 two processor cells interconnected in a configuration chosen from a group of  
3 configurations consisting of: a fully interconnected configuration, a cross-bar  
4 configuration, a mesh configuration, or a ring configuration.
- 1 6. The method of claim 5, wherein said step of recognizing comprises:  
2 determining whether said link provides sufficient bandwidth to complete said  
3 network operation.
- 1 7. The method of claim 5, wherein said step of recognizing comprises:  
2 choosing a second link from said plurality of links when a first link of said  
3 plurality of links does not provide sufficient bandwidth to perform said network  
4 operation.

1 8. The method of claim 1, wherein said step of utilizing comprises:  
2 suspending said network operation when said link of said plurality of links is  
3 not providing sufficient bandwidth to perform said network operation; and  
4 resuming said network operation when said link of said plurality of links  
5 provides sufficient bandwidth to perform said network operation.

1 9. The method of claim 1, further comprising:  
2 suspending said network operation when said link of said plurality of links is  
3 not providing sufficient bandwidth to perform said network operation; and  
4 performing said network operation on a second link of said plurality of links  
5 when said link is not providing sufficient bandwidth to perform said network operation.

1 10. A method for operating a network connecting a plurality of processor cells that  
2 are already configured in a multiprocessor system with a plurality of links, comprising:  
3 installing software on at least one processor cell of said plurality of processor  
4 cells, wherein said software is aware of said plurality of links between said plurality of  
5 processor cells;  
6 recognizing by said software when a network operation can use a link of said  
7 plurality of links to implement a network operation; and  
8 utilizing said link of said plurality of links to perform said network operation.

1 11. The method of claim 10, wherein said multiprocessor system is a symmetric  
2 multiprocessor system.

1 12. The method of claim 10, wherein said software is an operating system.

1 13. The method of claim 10, wherein said network is an Ethernet local area network  
2 (LAN).

1 14. The method of claim 10, wherein said multiprocessor system includes at least  
2 two processor cells interconnected in a configuration chosen from a group of  
3 configurations consisting of: a fully interconnected configuration, a cross-bar  
4 configuration, a mesh configuration, or a ring configuration.

1 15. The method of claim 14, wherein said step of recognizing comprises:  
 2 determining whether said link provides sufficient bandwidth to perform said  
 3 network operation.

1 16. The method of claim 14, wherein said step of recognizing comprises:  
 2 choosing a second link from said plurality of links when a first link of said  
 3 plurality of links does not provide sufficient bandwidth to perform said network  
 4 operation.

1 17. The method of claim 10, wherein said step of utilizing comprises:  
 2 suspending said network operation when said link of said plurality of links is  
 3 not providing sufficient bandwidth; and  
 4 resuming said network operation when said link of said plurality of links  
 5 provides sufficient bandwidth to perform said network operation.

1 18. The method of claim 10, further comprising:  
 2 suspending said network operation when said link of said plurality of links is  
 3 not providing sufficient bandwidth; and  
 4 performing said network operation on a second link of said plurality of links  
 5 when said link is not providing sufficient bandwidth to perform said network operation.

1 19. A network to perform a plurality of network operations, implemented on a  
 2 multiprocessor system including a plurality of links to connect a plurality of processor  
 3 cells, said network comprising:

4 a first module to recognize when a link of said plurality of links provides  
 5 sufficient bandwidth to perform a network operation of said plurality of network  
 6 operations; and

7 a second module to utilize said link to perform said network operation of said  
 8 plurality of network operations.

1 20. The network of claim 19, wherein said multiprocessor system is a symmetric  
 2 multiprocessor system.

- 1 21. The network of claim 19, wherein said network is an Ethernet LAN.
- 1 22. The network of claim 19, wherein said first module and said second module are  
2 implemented in an operating system.
- 1 23. The network of claim 22, wherein said operating system is installed on at least  
2 one processor cell of said plurality of processor cells.
- 1 24. The network of claim 19, wherein said multiprocessor system includes at least  
2 two processor cells interconnected in a configuration chosen from a group of  
3 configurations consisting of: a fully interconnected configuration, a cross-bar  
4 configuration, a mesh configuration, or a ring configuration.
- 1 25. The network of claim 19, wherein said first module comprises:  
2 software to determine whether said link provides sufficient bandwidth to  
3 perform said network operation.
- 1 26. The network of claim 19, wherein said first module comprises:  
2 software to choose a second link from said plurality of links when a first link of  
3 said plurality of links does not provide sufficient bandwidth to perform said network  
4 operation.
- 1 27. The network of claim 19, wherein said second module comprises:  
2 software to suspend said network operation when said link of said plurality of  
3 links is not providing sufficient bandwidth; and  
4 software to resume said network operation when said link of said plurality of  
5 links provides sufficient bandwidth to perform said network operation.

- 1 28. The network of claim 19, wherein said second module comprises:  
2 software to suspend said network operation when said link of said plurality of  
3 links is not providing sufficient bandwidth; and  
4 software to perform said network operation on a second link of said plurality of  
5 links when said link is not providing sufficient bandwidth to perform said network  
6 operation.